



SEQUENCE LISTING

<110> COLLART, FRANK R.
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JOACIMIAK, ANDRZEJ
ZHANG, RONGGUANG
WESTBROOK, EDWIN M.

<120> USE OF CRYSTAL STRUCTURE OF BACTERIAL IMP DEHYDROGENASE
TO DESIGN INHIBITORS OF BACTERIAL GROWTH

<130> 21416/90042

<140> 09/533,466

<141> 2000-03-23

<160> 23

<170> PatentIn Ver. 2.1

<210> 1

<211> 15

<212> PRT

<213> Streptococcus pyogenes

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<211> 15

<212> PRT

<213> Bacillus subtilis

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<213> Escherichia coli

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<212> PRT

<213> Bacillus subtilis

<400> 4

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 <212> PRT
 <213> *Mycobacterium tuberculosis*

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 Pro Gly Ser Ile Cys Thr Thr Arg Val Val Ala Gly Val Gly Val
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<210> 6
 <211> 15
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 <213> *Homo sapiens*

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 Ser Gly Ser Ile Cys Ile Thr Gln Glu Val Leu Ala Cys Gly Arg
 1 5 10 15

<210> 7
 <211> 15
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 <213> *Mus musculus*

<400> 7
 Ser Gly Ser Ile Cys Ile Thr Gln Glu Val Leu Ala Cys Gly Arg
 1 5 10 15

<210> 8
 <211> 15
 <212> PRT
 <213> *Arabidopsis thaliana*

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 Ser Gly Ser Ile Cys Ile Thr Gln Glu Val Leu Ala Cys Gly Arg
 1 5 10 15

<210> 9
 <211> 15
 <212> PRT
 <213> *Leishmania donovani*

<400> 9
 Ser Gly Ser Ile Cys Ile Thr Gln Glu Val Leu Ala Cys Gly Arg
 1 5 10 15

<210> 10
 <211> 15
 <212> PRT
 <213> *Saccharomyces cerevisiae*

<400> 10

Thr	Gly	Ser	Ile	Cys	Ile	Thr	Gln	Lys	Val	Met	Ala	Cys	Gly	Arg
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<210> 11

<211> 15

<212> PRT

<213> *Drosophila melanogaster*

<400> 11

Ser	Gly	Ser	Ile	Cys	Ile	Thr	Gln	Glu	Val	Met	Ala	Cys	Gly	Arg
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<210> 12

<211> 23

<212> PRT

<213> *Streptococcus pyogenes*

<400> 12

Met	Ala	Lys	Gly	Ser	Ser	Asp	Arg	Tyr	Phe	Gln	Ser	Asp	Asn	Ala	Ala
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Asp	Lys	Leu	Val	Pro	Glu	Gly
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<210> 13

<211> 23

<212> PRT

<213> *Bacillus subtilis*

<400> 13

Met	Ser	Lys	Gly	Ser	Ser	Asp	Arg	Tyr	Phe	Gln	Ser	Asp	Asn	Ala	Ala
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Asp	Lys	Leu	Val	Pro	Glu	Gly
			20			

<210> 14

<211> 24

<212> PRT

<213> *Escherichia coli*

<400> 14

Met	Lys	Lys	Gly	Ser	Ser	Asp	Arg	Tyr	Phe	Gln	Gly	Ser	Val	Asn	Glu
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Ala	Asn	Lys	Leu	Val	Pro	Glu	Gly
			20				

<210> 15

<211> 21

<212> PRT

<213> *Bacillus subtilis*

<400> 15

Met Glu Lys Gly Ser Lys Asp Arg Tyr Phe Gln Glu Glu Asn Lys Lys
 1 5 10 15

Phe Val Pro Glu Gly
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<210> 16

<211> 30

<212> PRT

<213> Mycobacterium tuberculosis

<400> 16

Met Arg Gly Arg Gly Gly Ala Thr Ser Tyr Ser Lys Asp Arg Tyr Phe
 1 5 10 15

Ala Asp Asp Ala Leu Ser Glu Asp Lys Leu Val Pro Glu Gly
 20 25 30

<210> 17

<211> 23

<212> PRT

<213> Homo sapiens

<400> 17

Met Asp Lys His Leu Ser Ser Gln Asn Arg Tyr Phe Ser Glu Ala Asp
 1 5 10 15

Lys Ile Lys Val Ala Gln Gly
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<210> 18

<211> 23

<212> PRT

<213> Mus musculus

<400> 18

Met Asp Lys His Leu Ser Ser Gln Asn Arg Tyr Phe Ser Glu Ala Asp
 1 5 10 15

Lys Ile Lys Val Ala Gln Gly
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<210> 19

<211> 27

<212> PRT

<213> Arabidopsis thaliana

<400> 19

Met Glu Arg Gly Asp Ala Lys Gly Ala Ala Met Ser Arg Tyr Tyr His
 1 5 10 15

Asn Glu Met Asp Lys Met Lys Val Ala Gln Gly
 20 25

<210> 20
 <211> 27
 <212> PRT
 <213> Leishmania donovani

<400> 20
 Met Gln Lys Thr Gly Thr Lys Gly Asn Ala Ser Thr Ser Arg Tyr Phe
 1 5 10 15

Ser Glu Ser Asp Ser Val Leu Val Ala Gln Gly
 20 25

<210> 21
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 <213> Drosophila melanogaster

<400> 21
 Met Thr Lys Gly Ser Asp Gln Arg Tyr Leu Gly Asp Gln Thr Lys Leu
 1 5 10 15

Lys Ile Ala Gln Gly
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<210> 22
 <211> 23
 <212> PRT
 <213> Saccharomyces cerevisiae

<400> 22
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Ala Val Gln Val Ala Gln Gly
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<210> 23
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 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 polypeptide

<220>
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 <222> (1)..(477)
 <223> "Xaa" represents selenomethionine

<400> 23

Ser Asn Trp Asp Thr Lys Phe Leu Lys Lys Gly Tyr Thr Phe Asp Asp
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 20 25 30
 Leu Lys Thr Lys Leu Ala Asp Asn Leu Thr Leu Asn Ile Pro Ile Ile
 35 40 45
 Thr Ala Ala Xaa Asp Thr Val Thr Gly Ser Lys Xaa Ala Ile Ala Ile
 50 55 60
 Ala Arg Ala Gly Gly Leu Gly Val Ile His Lys Asn Xaa Ser Ile Thr
 65 70 75 80
 Glu Gln Ala Glu Glu Val Arg Lys Val Lys Arg Ser Glu Asn Gly Val
 85 90 95
 Ile Ile Asp Pro Phe Phe Leu Thr Pro Glu His Lys Val Ser Glu Ala
 100 105 110
 Glu Glu Leu Xaa Gln Arg Tyr Arg Ile Ser Gly Val Pro Ile Val Glu
 115 120 125
 Thr Leu Ala Asn Arg Lys Leu Val Gly Ile Ile Thr Asn Arg Asp Xaa
 130 135 140
 Arg Phe Ile Ser Asp Tyr Asn Ala Pro Ile Ser Glu His Xaa Thr Ser
 145 150 155 160
 Glu His Leu Val Thr Ala Ala Val Gly Thr Asp Leu Glu Thr Ala Glu
 165 170 175
 Arg Ile Leu His Glu His Arg Ile Glu Lys Leu Pro Leu Val Asp Asn
 180 185 190
 Ser Gly Arg Leu Ser Gly Leu Ile Thr Ile Lys Asp Ile Glu Lys Val
 195 200 205
 Ile Glu Phe Pro His Ala Ala Lys Asp Glu Phe Gly Arg Leu Leu Val
 210 215 220
 Ala Ala Ala Val Gly Val Thr Ser Asp Thr Phe Glu Arg Ala Glu Ala
 225 230 235 240
 Leu Phe Glu Ala Gly Ala Asp Ala Ile Val Ile Asp Thr Ala His Gly
 245 250 255
 His Ser Ala Gly Val Leu Arg Lys Ile Ala Glu Ile Arg Ala His Phe
 260 265 270
 Pro Asn Arg Thr Leu Ile Ala Gly Asn Ile Ala Thr Ala Glu Gly Ala
 275 280 285
 Arg Ala Leu Tyr Asp Ala Gly Val Asp Val Val Lys Val Gly Ile Gly
 290 295 300

Pro Gly Ser Ile Cys Thr Thr Arg Val Val Ala Gly Val Gly Val Pro
 305 310 315 320
 Gln Val Thr Ala Ile Tyr Asp Ala Ala Ala Val Ala Arg Glu Tyr Gly
 325 330 335
 Lys Thr Ile Ile Ala Asp Gly Gly Ile Lys Tyr Ser Gly Asp Ile Val
 340 345 350
 Lys Ala Leu Ala Ala Gly Gly Asn Ala Val Xaa Leu Gly Ser Xaa Phe
 355 360 365
 Ala Gly Thr Asp Glu Ala Pro Gly Glu Thr Glu Ile Tyr Gln Gly Arg
 370 375 380
 Lys Tyr Lys Thr Tyr Arg Gly Xaa Gly Ser Ile Ala Ala Xaa Lys Lys
 385 390 395 400
 Asn Lys Leu Val Pro Glu Gly Ile Glu Gly Arg Val Ala Tyr Lys Gly
 405 410 415
 Ala Ala Ser Asp Ile Val Phe Gln Xaa Leu Gly Gly Ile Arg Ser Gly
 420 425 430
 Xaa Gly Tyr Val Gly Ala Gly Asp Ile Gln Glu Leu His Glu Asn Ala
 435 440 445
 Gln Phe Val Glu Xaa Ser Gly Ala Gly Leu Ile Glu Ser His Pro His
 450 455 460
 Asp Val Gln Ile Thr Asn Glu Ala Pro Asn Tyr Ser Val
 465 470 475